

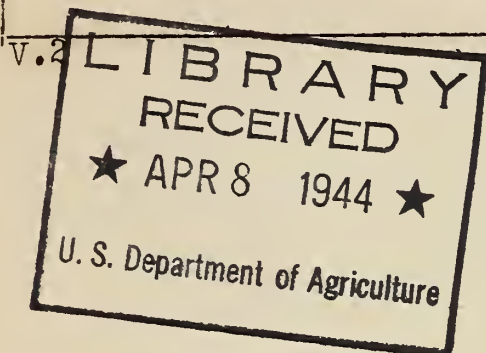
Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

1.96
R312
Cp. 4

SOIL CONSERVATION LITERATURE
SELECTED CURRENT REFERENCES

V.2



March/April, 1938

No.2

Periodical Articles.	Page 36
Book and Pamphlet Notes and Abstracts.	Page 48
State Experiment Station and Extension Publications.	Page 53
U.S. Government Publications.	Page 57
Translations on File in Soil Conservation Service Library.	Page 62

"I have written many verses, but the best poems I have
produced are the trees I planted on the hillside."

- Oliver Wendall Holmes

Compiled By The Library Staff Of The Soil Conservation Service
From Publications Received In The
United States Department of Agriculture Library, Washington, D.C.

The publications listed herein may in most cases be borrowed from the Service Library by members of the Washington and field staffs. For convenience, Library call numbers are given after each book and pamphlet entry. These should be included when requesting loans.

Mildred Benton
Librarian

PERIODICAL ARTICLESCover Crops

Odland, T.E. and Knoblauch, H.C. The value of cover crops in continuous corn culture. Jour. Amer. Soc. Agron. 30(1):22-29. January 1938.

"The purpose of this paper is to present some results from a long-continued experiment with rye and clover cover crops in continuous corn culture at the Rhode Island Agricultural Experiment Station...

"Corn was grown continuously over a period of 40 years with a comparison of both legume and nonlegume cover crops and no cover crops. Variations in fertilization and disposition of the corn stover were also included.

"The legume cover crops were the most effective in maintaining the yields of corn in this test.

Winter rye seeded at the last cultivation of the corn in the fall increased the average annual yield by 6 bushels per acre over the adjoining no-cover-crop section for the 34 year period of 1900-1933.

"The yields of stover were increased by both the legume and rye cover crops. The increase in yield of stover was not as large in proportion, however, as the increase in yield of grain...

"Both the legume and rye cover crops lessened the rate of decrease in total nitrogen.

"The cover crops used increase the water-holding capacity of the soil..."

Ecology

Aikman, J.M. and Smelser, A.W. The structure and environment of forest communities in central Iowa. Ecology 19(1):141-150. January 1938.
Literature cited, p.150.

Whitfield, C.J. and Boutner, E.L. Natural vegetation in the desert plains grassland. Ecology 19(1):26-37. January 1938.
Literature cited, p.37.

The region described stretches from southwestern Texas through southern New Mexico and Arizona. Information is given relative to soils, climate, precipitation, temperature, evaporation and vegetation.

The following tables are included: Table I. Mechanical composition, moisture equivalents, and wilting coefficients of soils at 2,200 and 4,000 feet elevations; Table II. Soluble salt content of soils 35 miles from Roosevelt, Arizona at 4,000 feet elevation; Table III. Average monthly rainfall; Table IV. Air temperature; Table V. Comparative average monthly and annual evaporation in inches.

Evaporation

Stalfelt, M.G. The influence of the vegetation upon evaporation from the surface of the soil. Svenska Skogsvårdsför. Tidskr. 35(2):161-195. April 1937.

"Literatur", p.195.

Article in German.

Farm Machinery

Holt, E.F. Dam busters. Capper's Farmer 49(3):16, illus. March 1938.
Implement designed by L.C. Aicher and E.N. Canaday, of the Hays, Kansas Experiment Station which will level water conserving dams.

McNeal, Xzin. A plow that builds contour furrows. Agr. Engin. 19(2): 57-58, illus. February 1938.

Presented before the Soil and Water Conservation Division of the American Society of Agricultural Engineers at Chicago, December 2, 1937.

Includes illustration showing machine designed and built to meet the following requirements: 1. Disturb the least possible area of sod; 2. Make a ridge capable of impounding the water from an average rain; 3. Keep the sod top side up, with no subsoil exposed; 4. Be reversible, to save time and lower cost of making the furrows; 5. Have a draft light enough so that it could be pulled by a two-plow tractor.

New binder-tractor for terraced land. Seed World 43(1):28. Jan. 14, 1938.

Describes new type of hook-up between tractor and grain binder, to facilitate harvesting grain on terraced land, which, according to R.A. Norton, has been designed at the Soil conservation experimental station at Clarinda, Iowa.

Fertilizers

Fitzgerald, O.A. This Idahoan does right by his soil. West. Farm Life, p.3, illus. Jan. 15, 1938.

Finding that his soil needed humus to give it body to prevent blowing, a Shelley, Idaho farmer began to use "strawy manure" in 1929 and by now has just about completed "popping up" his 190 acres. He has found that his manure program has had a direct effect on potato quality as well as yields. The manure adds fertility and humus and also builds the water-holding capacity of the soil.

Holtz, H.F. and Vandecavey, S.C. Organic residues and nitrogen fertilizers in relation to the productivity and humus content of Palouse silt loam. Soil Sci. 45(2):143-163, illus. February 1938.

References p.163.

In experiments at the Washington agricultural experiment station "convincing evidence was produced to show that the decomposition of organic residues in Palouse silt loam under its natural climatic environment results in the formation of humus with a carbon-nitrogen ratio of approximately 12. Any carbon added in excess of this ratio by means of organic residues was rapidly dissipated by CO₂ evolution.

"The practice of returning straw to this soil, although having a beneficial physical effect on the soil and causing a decline in the rate of loss of soil humus under the prevailing cropping practices, cannot be expected to result in the production of substantial quantities of new humus unless the straw is supplemented with some form of available nitrogen in sufficient amounts to make the total supply approximately equivalent to that in alfalfa hay."

Singh, B.N., Singh, S.M., and Gupta, P.P. Fertility value of cultivated land as influenced by crop-residue and season. Soil Sci. 45(1):3-12, illus. January 1938.

"References," p.12.

Fertilizers - Continued

Singh, B.M., Singh, S.M., and Gupta, P.P. - continued

Summary and conclusions: "This paper deals with the effect of crop-residue and season on the amount of moisture, available nitrogen and organic matter in cultivated land..."

"The residual effect of leguminous and nonleguminous plants on the fertility of land stresses the importance of the utilization of legumes in general in increasing the fertility of the land and in initiating a more profitable scheme wherein a due consideration is, of necessity, to be paid to the rotation of crops and the use of leguminous crops for green-manuring purposes..."

"Of the leguminous crops used in the study... Crotalaria juncea was found to contribute the most to the nitrogen content of the soil and to the yield of the succeeding crop."

Geology

Bryan, Kirk and McCann, F.T. The Coja del Rio Puerco: a border feature of the basin and range province in New Mexico. II. Geomorphology. Jour. Geol. 46(1):1-16, illus. Jan/Feb. 1938.

Flint, R.F. Summary of late-Cenozoic geology of southeastern Washington. Amer. Jour. Sci. 35(207):223-230. March 1938.

Offered as a temporary document, including some hitherto unpublished observations which the writer suggests may prove useful pending the appearance of more detailed studies.

Grasses

Ahlgren, H.L. Better seeding practices for grasses. Hoard's Dairyman 83(5):137, 144, illus. Mar. 10, 1938.

Table shows effect of depth of seeding on the stand of a number of forage grasses and legumes.

Briggs, F.N. A new and better Sudan grass. Calif. Cult. 84(24):796. Nov. 20, 1937.

Sudan 23, is said to be a new, more vigorous, higher yielding and more uniform strain and is being released for the first time by the Division of Agronomy, California College of Agriculture.

Judd, B.I. Green needle grass, Stipa viridula, for erosion control. Jour. Amer. Soc. Agron. 30(2):160-161. February 1938.

Grassland Research

Hanson, H.C. and Vorhies, C.T. Need for research on grasslands. Sci. Mo. 46(3):230-241, illus. March 1938.

This report prepared for the Committee on Ecology of Grasslands of North America of the National Research Council includes the following suggested topics for research: (1) Study of life history and habits of individual grassland plants and animals; (2) Study of the processes of biotic communities, such as invasion, competition, association and succession; (3) Study of the relation of plants and

Grassland Research - Continued

Hanson, H.C. and Vorhies, C.T. - continued

animals to soil building, soil improvement and soil binding; (4) Basic soil studies; (5) Study of the relation of vegetation and animal life to climatic conditions; (6) Study of the relation of animals to climatic conditions; (7) Study of interrelations between vegetation and grazing by live stock and by wild animals; (8) Study of the interrelations of vegetation and biotic factors; (9) Studies of insects and the control of injurious species.

Richardson, H.L. The nitrogen cycle in grassland soils: with special reference to the Rothamsted Park grass experiment. Jour. Agr. Sci. 28(1):73-121. January 1938.
References, pp. 120-121.

Grazing

Culley, Matt. Grazing habits of range cattle. Amer. Cattle Prod. 19(8):3-4, 16-17, illus. January 1938.
Cites some of the observations recorded during the study at the Santa Rita Experimental Range, south of Tucson.
A table gives preference classification of some common range grasses, weeds, and shrubs.

Gully Control

Hendricks, B.A. Revegetation of small gullies through the use of seeded earth-filled sacks. Jour. Forestry 36(3):348-349, illus. March 1938.
Describes method of revegetation with grass tried at Parker Creek Forest and Range Influences Station, a branch of the Southwestern Forest and Range Experiment Station, located 45 miles north of Globe, Arizona.

Raper, Arthur. Gullies and what they mean. Social Forces 16(2): 201-207. December 1937.
Presented at the meeting of the Southern Sociological Society, Birmingham, Alabama, April 3, 1937.
Social and economic aspects of soil-depletion in the South.

Land Utilization

Salisbury, James, Jr. Land use adjustments for Oklahoma. Current Farm Econ. 10(6):120-124, illus. December 1937.
Included is a preliminary problem area map of Oklahoma showing areas to be shifted from arable farming to livestock ranching or grazing districts and forests.

Legumes

Butler, Eugene. At last a Blackland legume - Hubam clover. Prog. Farmer and South. Ruralist (Tex. ed.) 53(2):8, 19, illus. February 1938.

Legumes - Continued

Butler, Eugene. - continued

Reports received from soil conservation projects at Garland, Temple, Lockhart and Gatesville, Texas indicate that Hubam fills a long-felt need for a legume that can be grown satisfactorily on root-rot-infested land.

Erne, Mary, Hutton, Jean and Porter, R.H. Seed impermeability and viability of native and introduced species of leguminosae. Iowa State Col. Jour. Sci. 12(1):5-24, illus. October 1937.

"Literature cited," p. 22-24.

Hyland, H.L. Comparison of legume growth in different soil types at varying acidity levels. Jour. Amer. Soc. Agron. 30(2):111-121, illus. February 1938.

"Literature cited," p. 121.

"The studies herein reported were conducted under greenhouse conditions at Arlington Experiment Farm, Arlington, Va., in 1934 and 1936 to determine the variation in growth response of specific legumes when grown in different soil types and at varying pH levels."

Orchard Erosion

Blake, M.A. The control of soil erosion in peach orchards. N.J. State Hort. Soc. News 19(1):963-965, 970, illus. January 1938.

Discussion and recommendations pertain to New Jersey orchards.

Lord, Russell. You can build your own topsoil. Country Home 62(2):60. February 1938.

How a Harford county, Maryland fruit grower conquered erosion by putting all of his 250 acres of bearing orchards under cover - alfalfa and sweet clover - winter and summer.

Montgomery, G.A. Orchard dikes. Capper's Farmer 49(2):18, illus. February 1938.

During the 1936 drouth an Otoe county, Nebraska farmer devised an irrigation system with the use of dikes which is designed to function automatically in catching more precipitation. Ditches distribute water from his pumping plant, collect runoff and deliver it to tree basins.

Rosencrans, L.N. Erosion cuts Michigan fruit yields. U.S. Soil Conserv. Serv., Dayton, Ohio. Reg. Circ. 82. 1 l., mimeo. Jan. 10, 1938.

A table gives data obtained by the Benton Harbor, Michigan project indicating that a correlation exists between erosion and reduced yields. The table, which cites 1936 figures, includes information on slope class, slope percentage, percentage of topsoil lost, yield, percentage of decrease in yield and loss per tree at \$1.50 per bushel.

Rain-gauges

Matthews, L.S. A cause of error in self-recording rain-gauges. Met. Mag. 72(864):283-297, illus. January 1938.

Sedimentation

Collins, H.H., Jr. Soil or sediment. Nature Mag. 31(3):143-146, 190. March 1938.

A popular article, calling attention to the destruction caused by silting and pointing out fact that checking is possible only through complete erosion control of an entire watershed.

Slade, J.J. The dynamics of sedimentation. Jour. Amer. Water Works Assoc. 29(11):1780-1802. November 1937.

Soil Conservation

Case, H.C.M. Farm management aspects of soil conservation. Jour. Farm Econ. 20(1):102-114. February 1938.

Paper read at twenty-eighth annual meeting, American Farm Economics Association, Atlantic City, December 28, 1937.

Discussion by C.W. Crickman, pp. 114-115.

Ciriacy-Wantrup, Siegfried von. Soil conservation in European farm management. Jour. Farm Econ. 20(1):86-101. February 1938.

This paper, no. 66, The Giannini Foundation of Agricultural Economics, was read at the twenty-eighth annual meeting of the American Farm Economics Association, Atlantic City, December 28, 1937.

Discussion by W.J. Roth, pp. 115-118.

Graves, G.W. Soil, its use and conservation. Cal. State Dept. Educ. Sci. Guide for Elementary Schools 4(2):1-54, illus. September 1937.

Bibliography pp. 52-54.

"The purpose of this bulletin is to assemble certain facts in regard to soils and their relation to erosion and soil conservation suitable for teaching in elementary schools."

It includes a curriculum unit developed at the Corralitos elementary school, Santa Cruz county, California.

Hill, E.B. and Taylor, H.B. Land use and soil conservation practices in Lenawee county. Mich. Agr. Exp. Sta. Quart. Bull. 20(1):23-28, illus. August 1937.

Information obtained during a farm management study of 97 farms in Hudson and Medina townships, Lenawee county, in 1936.

Hill, H.O. Soil conservation in the Texas blacklands; a discussion of the means developed for erosion control on a federal project. Civ. Engin. 8(2):109-112, illus. February 1938.

Article developed from an address delivered before the Texas section of the American Society of Civil Engineers.

It tells of the erosion control methods found most effective on the SCS project in the Elm Creek watershed; namely terracing, strip cropping, both with and without terracing; pasture furrowing or ridging; and erosion control by means of erosion dams and vegetation.

Joel, A.H. The application of soil conservation surveys to soil conservation practice in the United States. Sci. Agr. 18(3):144-147. November 1937.

Soil Conservation - Continued

Joel, A.H. - continued

Read before a meeting of the Soils Group of the C.S.T.A. at the University of Saskatchewan, Saskatoon, Canada, June 28 to 30, 1937.

Nelson, Peter. Tenancy - a major factor in soil conservation.

Jour. Land & Pub. Utility Econ. 14(1):88-91. February 1938.

A brief examination of the facts concerning type of farming, tenure situation, and soil conservation in Oklahoma for the light they may throw upon the proposals for improving agricultural conditions in the State.

Newcomb, W.K. Land values in relation to soil conservation. Northwest Sci. 12(1):20-23. January 1938.

"We may conclude that land values in relation to soil conservation depend for their permanence and stability upon the degree of accuracy in our conception of the best use of the land and the extent to which such proper use affects the ability of the land to serve the needs of men in a sustained and balanced program."

Renner, G.T. Conservation as a unit of study in geography. Education 58(5):283-290. January 1938.

Roth, W.J. and Garin, A.N. Economic implications of a soil and water conservation program. Soil Conserv. 3(8):223-225, illus. February 1938.

Soil Erosion and Control. Foreign Countries.

Gorrie, R.M. The measurement of soil erosion and run-off; an attempt and some results. Indian Forester 63(12):839-846, illus. December 1937.

"Summary - Examples are given of soil erosion and run-off data actually measured in the U.S.A.; the type of apparatus used in these experiments is described and some of the difficulties discussed. The first attempts at evolving a similar apparatus for Indian conditions are described. Data so far collected are given, but merely as an indication of the types of error which are to be expected. The Punjab Irrigation Research Institute has collected these figures while reducing the measurements to a standard routine, so that the next step, namely the measurement of erosion on various types of land, can be undertaken with some guarantee of precision."

Gorrie, R.M. Soil and water conservation in the Punjab. Geogr. Rev. 28(1):20-31, illus. January 1938.

O'Brien, T.E.H. Soil erosion in relation to rubber estates. Rubber Res. Scheme, Ceylon. Quart. Circ. 14(3-4):62-70. December 1937.

Address, Katala District Planters' Association, June 12, 1937.

The author states that so far as rubber estates in Ceylon are concerned the problem is a relatively simple one and can be summed up under the headings of ground cover and drainage. The rubber industry may be regarded as standing midway between the tea and coconut industries in regard to the urgency and difficulties of soil conservation measures.

Soil Erosion and Control. Foreign Countries. - Continued

O'Brien, T.E.H. - continued

Mention is made of the so-called "forestry" system of cultivation which has made considerable headway in Malaya.

Quevedo, M.A. de. La correccion torrencial del rio de la Carbonera. Mexico. Dept. Forestal y de Caza y Pesca. Bol. 2(7):137-150, illus.

April-August 1937.

Torrent control on La Carbonera river.

Soil research. Sci. 87(2252): 8(Suppl.) Feb. 25, 1938.

Quotes from remarks of J.L. Doughty, senior soil specialist, relative to soil erosion studies in progress at the Soil Research Laboratory of the Dominion of Canada Experimental Station, Swift Current, Saskatchewan.

"Patterned after wind tunnels used by aeronautical engineers the world over, two machines have been set to work to tell erosion specialists exactly how erosion takes place... Data resulting from the study, it is believed, will constitute one of the first exact determinations of the conditions necessary for rapid wind erosion."

Stamp, L.D. Land utilization and soil erosion in Nigeria. Geogr. Rev. 28(1):32-45, illus. January 1938.

It is the opinion of the author that in Nigeria the native farmer has already evolved a scheme of farming which cannot be bettered in principle even if it can be improved in detail, and that, as practiced in some areas, this scheme of "basin cultivation" affords almost complete protection against soil erosion and loss of fertility.

The system which is, in miniature, the basin-irrigation system of the Nile, is briefly described.

Stamp, L.D. Soil conservation in tropical Africa. Nature 141(3563): 268-270, illus. Feb. 12, 1938.

The author describes the "ridge and basin" system of native cultivation in Nigeria which method is said to be very effective in preventing soil erosion. He believes that "if America could invent a plough which will imitate the Nigerian system by replacing the long furrow by a series of isolated elongated basins, one at least of her major problems in the dry lands of the Middle West might be solved."

Strelo, G. Torrent control and fixation of mountain soils in various countries. Wien Allg. Forst- u. Jagdztg. 55(27):119-120. Jly 2, 1937. 55(28):125-126. Jly 9, 1937. 55(29):129-130. Jly 16, 1937.

Soil Erosion and Control. United States.

Detwiler, S.B. The soil-saving persimmon. Soil Conserv. 3(3): 230-231, illus. February 1938.

Glendinning, R.M. Erosion conditions in Grainger county, Tennessee. Econ. Geogr. 14(1):80-84, illus. January 1938.

Soil Erosion and Control. United States. - Continued

Glandinning, R.M. -- continued

This brief discussion is concerned only with erosion conditions as shown by the Rural Land Classification Survey of the Land Planning and Housing Division of the Tennessee Valley Authority.

Hafenrichter, A.L. and Rockie, W.A. Ecological aspects of soil erosion in the Pacific northwest as determined by the reconnaissance erosion survey. Northwest Sci. 11(4):93-103, illus. November 1937.
Literature cited, p. 103.

Hardisty, F.E., DeLong, G.F. and Dolvin, R.L. New mechanical technique to develop vegetative cover. Agr. Engin. 19(1):11-12, 16. January 1938.
Describes technique developed at the SCS project, Athens, Georgia. The five methods described involve meadow strip preparation, lespedeza meadow strips, Bermuda meadow strips, gullies and abandoned road rights-of-way as vegetative terrace outlets, steep grade moderate velocity Bermuda terrace outlets and pasture work.

Woodward, Lowell and Anderson, D.A. A device for the rapid collection of surface-inch soil samples. Jour. Amer. Soc. Agron. 30(2):162-163. February 1938.

Analysis of the 6,000 samples taken with this device, which is described, has given a clear-cut picture of soil losses caused by accelerated erosion.

The authors of the article are connected with the Intermountain Forest and Range Experiment Station.

Soil Microbiology

Stevens, K.R. Influence of manure, irrigation, and cropping practices upon soil microbiological activities. Soil Sci. 45(2):95-109, illus. February 1938.

Studies were made at the Utah agricultural experiment station on soil which had been under known field treatment for 21 years.

Waksman, S.A. The living soil. Soil Conserv. 3(7):173-177, illus. January 1938.

Discusses part played by micro-organisms in the conservation of the fertility of the soil.

Soil Moisture.

Floroll, V.H. Basin listing to retain snow moisture. Soil Conserv. 3(7):194-195, illus. January 1938.

Gives experimental data obtained from a field experiment planned in the fall of 1936 on cooperators' farms within the Wolsey-Shue Creek demonstration area in South Dakota. The specific objective was to compare the effectiveness of basin listing with that of ordinary listing and to contrast results from these methods with those obtained on untreated fields previously used for grain and row crops where wind strip cropping is practiced.

Included is a summary table of results of the moisture penetration study.

Soil Moisture - Continued

Tibbetts, F.H. Renewing underground water supply. Engin. News Rec. 120(10):361-365, illus. Mar. 10, 1938.

Data on operation of percolating areas as accumulated and applied successfully in renewing the underground supply of California's Santa Clara Valley.

Tisdall, A.L. Moisture content fluctuations on irrigated soils in South Australia. Jour. Aust. Inst. Agr. Sci. 3(3):162-166. Sept. 1937.

"The inter-irrigation fluctuations in soil moisture content were studied on three soil types. The fluctuations were limited to the top two feet, and soil moisture depletion in this zone increased as the season advanced. In all three cases the soil moisture content remained considerably above the permanent wilting percentage."

Soil Studies

Dixon, J.K. and Harris, A.C. Chemical studies on some leached soils. New Zeal. Jour. Sci. and Technol. 19(3):173-179. August 1937. References, p. 179.

Donat, Josef. Ein verfahren zur kennzeichnung des bodengefüges. Ernähr. Pflanze 33(23):357-361, illus. Dec. 1, 1937.

"Measurement of the energy with which H_2O is retained by capillary attraction in the soil is a means of detg. the proportion of pores of different magnitudes which are present. The H_2O content of the soil is measured and the soil sample is subjected to different neg. pressures in such a way that the H_2O content of the soil rises or falls to the level corresponding to the equil. between the capillary attraction and the force of gravity under the given conditions. Two examples are given, demonstrating the beneficial effect of frost and the injurious effect of Na ions on soil structure. The method may be used to predict the effect of a specific fertilizer treatment and to study the influence of base exchange on the structure of the soil." - Chem. Abst. 32(4):1375. February 20, 1938.

Gerdol, R.W. Adaptation of the hydrometer method to aggregate analysis of soils. Jour. Amer. Soc. Agron. 30(2):107-110, illus. February 1938.

"Literature cited," p. 110.

"A method involving the use of the Bouyoucos hydrometer has been developed which permits the determination of certain properties of the soil aggregates. These properties are: (a) the percentage of clay in the aggregated state; (b) the energy required to obtain complete dispersion of the aggregates, or inversely the stability of the aggregates; (c) the dispersibility of the aggregated clay as a result of the application of increasing amounts of mechanical, or chemical and mechanical, energy; and (d) the proportion of the total silt and clay contained in aggregates greater than 0.05 mm.

"This method can also be used to determine whether sheet erosion is taking place in the form of texture separates or as aggregates as reported by Yoder."

Soil Studies - Continued

Kummer, F.A. and Nichols, I.L. The dynamic properties of soil. VII. A study of the nature of physical forces governing the adhesion between soil and metal surfaces. Agr. Engin. 19(2):73-77, illus. February 1938.

Presented before the Power and Machinery Division, American Society of Agricultural Engineers, Chicago, December 1, 1937.

This paper is primarily intended to give a progress report of a study of the adhesive forces between soil and solutions and metals in connection with research in soil dynamics conducted at the Alabama Agricultural Experiment Station to provide a more exact basis for the design of tillage operations.

Terracing

Smith, D.D. Experimental studies in terracing. Agr. Engin. 19(2):63-66, illus. February 1938.

Presented before Soil and Water Conservation Division, annual meeting, American Society of Agricultural Engineers, Urbana, Illinois, June 24, 1937.

Presents and discusses runoff and soil loss data from certain of the terracing experiments at the Bethany (Missouri) Soil Conservation Experiment Station.

Paragraph headings include: Terrace spacing; Terrace grades; Terrace maintenance and cross sections; Runoff hydrographs from small cultivated watersheds.

Thalmann, V.W. Direct graphic solution of terrace outlet channel dimensions. Agr. Engin. 19(2):55-56, illus. February 1938.

Wheeler, A.M. Borrowed water. Capper's Farmer 49(2):10, illus. February 1938.

Describes syrup pan terrace system which provides for runoff irrigation on a Greer county, Oklahoma farm. Yield and income figures are cited to show advantage of additional water obtained by this system.

Water Conservation

Fly, J.L. The role of the federal government in the conservation and utilization of water resources. Pub. Utilities 20(9):604-614. Oct. 28, 1937.

The author states that the Federal government's responsibility for conservation and utilization of water resources is broadly and deeply rooted in over a century of our history. In this paper he sketches the development of responsibility.

Marshall, H.H. Development of small water conservation projects under the P.F.R. program. Engineering features of water conservation projects being constructed in the Prairie Provinces with assistance from the Dominion government - details of stock-watering dams, dugouts, irrigation systems and pump irrigation. Canad. Engin. 74(1):7-10, illus. Jan. 4, 1938.

Water Conservation - Continued

Marshall, M.H. - continued

Refers to development of one of the main objectives of the Prairie Farm Rehabilitation Act, passed in 1935, namely, the conservation of surface water run-off.

Wildlife Management

Dalke, P.D. The cover map in wildlife management. Jour. Wildlife Management 1(3-4):100-105, illus. October 1937.

The method outlined has a specific use only for southern New England, according to the author. "The principles of plant succession, however, may be employed as a basis for cover mapping in all sections of the country."

Plant names indicating utilization by wildlife. Wildlife Rev. no. 12, pages 22-36. February 1938.

Wind Erosion and Control

Baum, A.W. Coulee colossus. Country Gent. 108(2):7-8, 68-69, illus. February 1937.

Discusses feasibility of agriculture in the Columbia river irrigation basin. It is predicted that wind erosion within ten or twenty years would be a serious menace to eastern Washington dry farming.

Guild, E.R. Land whoa! The migration of Cape Henry. Mil. Engin. 30(170):81-85, illus. March-April 1938.

This article is mainly concerned with a means of keeping the sand on the foreshore by stopping wind erosion. This means was successfully developed in 1931 in the form of a "brush groin" which used the power of the wind to build a "groin dune" athwart the beach.

Pictures illustrate progressive steps in the building of a foredune.

Langham, W.H., Foster, R.L. and Daniel, H.A. The amount of dust in the air at plant height during wind storms at Goodwell, Oklahoma in 1936-1937. Jour. Amer. Soc. Agron. 30(2):139-144, illus. February 1938.

"Literature cited," p. 144.

Measurements were made with an impinger tube to determine the amount of dust per cubic foot of air at various times during the 29 dust storms of 1936 and 1937.

Musgrave, G.W. Field research offers significant new findings. Soil Conserv. 3(8):210-214, illus. February 1938.

Soil and Water Conservation Section experiments have revealed that "close vegetation reduces rate of run-off; crops with large, dense foliage intercept rainfall; and organic matter increases the permeability of most soils to water.

"Permeable grass channel linings are extremely resistant to high velocities of flow... Near Dalhart, Texas, in the reclamation of mounting dunes the force of wind is utilized to level dune crests and redistribute the sand on the eroded land. The effect of wind jets was produced first by the setting on end of gunny sacks filled with sand

Wind Erosion and Control - Continued

Musgrave, G.W. - continued

at short intervals along the crests of dunes and then by gouging wind channels in the partially leveled dune areas. The spreading sand was caught in lister rows and stabilized by suitable vegetation."

Sidwell, Raymond. Sand and dust storms in vicinity of Lubbock, Texas. *Econ. Geogr.* 14(1):98-102, illus. January, 1938.

Observation of the storms in the spring of 1935 and 1936 furnishes information as to the texture and mineral content of the material carried by the wind, general weather conditions; the effect of the sandstorms on general health conditions; and effects of the storms on growing vegetation.

Steenivasaiah, B.N. and Sur, N.K. The thermodynamics of duststorms. *Current Sci.* 6(5):209-212, illus. November 1937.

The authors have chosen the duststorms of Agra, India for study.

Watt, A.S. Studies in the ecology of Brockland. III. The origin and development of the Festuco-agrostidetum on eroded sand. *Jour. Ecol.* 26(1):1-37. February 1938.

References, p.37.

The subject of the paper is the building up of a new vegetation on the raw soil exposed as the result of wind erosion.

Whitfield, C.J. and Newport, F.C. The reclamation of a sand dune area. *Soil Conserv.* 3(7):190-193, illus. January 1938.

Guiding principles and progress of wind erosion control near Dalhart, Texas.

BOOK AND PAMPHLET NOTES AND ABSTRACTS

American national live stock association. If and when it rains. The stockman's view of the range question. 57pp., illus. [Denver, Col. 1938] 60.1 Am3

[By F.E. Hollin?]

Presents facts, figures, and authorities to show that the stockman is not a despoiler of the western range lands.

American society of agricultural engineers. [Publications] 6 parts, mimeogr. [St. Joseph, Mich., 1937?] 56.7 Am32

Contents: [Part 1] A contribution of the terrace project planning sub-committee, 1936-1937; [Part 2] Contribution of the sub-committee on terrace equipment and construction for the year 1936-1937; [Part 3] Final report, 1936-1937 Sub-committee on erosion control in terrace outlets; [Part 4] Report of the sub-committee on cost data; [Part 5] Final report 1936-37, Sub-committee on control of gully erosion; [Part 6] Final report, 1936-37. A.S.A.E. sub-committee on contour furrowing.

American society of agricultural engineers. Committee on hydrology.
Bibliography of hydrologic information. 6pp., mimeogr. Saint
Joseph, Michigan, June 1937. 241.4 Am38B

American society of agricultural engineers. Committee on soil erosion.
Subcommittee on bibliography and review of reports. Bibliography
on soil and water conservation and hydrology. 23pp., mimeogr.
Saint Joseph, Michigan, June 1937. 241.4 Am38

Blosser, R.H. A preliminary report of a study of strip cropping in
Belmont county, Ohio. 8pp., mimeogr. Columbus, Ohio, September 1937.
56.7 B62

Department of Rural Economics, Ohio State University and the Soil
Conservation Service and Bureau of Agricultural Economics, United
States Department of Agriculture cooperating.

Burdick, R.T. and Whitney, R.C. A study of farm organization and soil
management practices in Colorado in relation to agricultural con-
servation and adjustment with special reference to formulation of
programs under the soil conservation and domestic allotment act.
43 numb. l., mimeogr. [Fort Collins, Colorado?] April 1937. 281.011 C712

Issued by Colorado experiment station, Department of economics and
sociology, Colorado agricultural college cooperating with Division of
farm management and costs, Bureau of agricultural economics, and United
States Department of agriculture.

The two sections selected for study were the Yampa area and the north-
eastern Colorado area.

California. Department of public works. Division of water resources.
South coastal basin investigation. Records of ground water levels at
wells for the year 1936. Precipitation records for the season 1935-36.
Cal. Dept. Pub. Works. Div. Water Res. Bull. 39-E. 175pp., mimeogr.
Sacramento, 1937. 290.9 C123 no. 39-E

Canada. Experimental farms. Report of proceedings under the Prairie
farm rehabilitation act for the fiscal year ending March 31, 1937.
50pp., mimeogr. [Ottawa, 1938?] 281.13 C164 1936-37

The Prairie Farm Rehabilitation Act was passed by the Parliament
of Canada in April 1935 "to provide for the rehabilitation of drought
and soil drifting areas in the Provinces of Manitoba, Saskatchewan, and
Alberta."

This report indicates work in progress to carry out the objectives
of the act. It is stated that the value of drought resistant, soil-
binding grasses for reclamation and soil-drifting control is being
demonstrated. Tree planting as a drought and soil-drifting control
measure is being promoted on a large scale. Land utilization studies
based on economic surveys, soil surveys and farm ownership investiga-
tions have been undertaken.

A major phase of the program is the development of surface water
resources for stock-watering purposes.

A large amount of research is in progress, including soil research,
soil survey and land utilization investigations.

Collingwood, G.H. Knowing your trees. 109pp., illus. Washington, D.C., The American forestry association, 1937. 99.3 C69

Collection of fifty-three tree descriptions which have appeared in "American Forests". Includes photographs of the full tree - leaf, bark, flower and fruit.

Croft, A.R., Woodward, Lowell and Anderson, D.A. A comparison of accelerated erosion losses in Emigration, Red Butte and City Crook canyons. Utah Acad. Sci. Arts and Letters. Proc. 14:31-32. Provo, 1937. 500 Ut1 v.14 1936/37.

By far the most severe losses are indicated to be in Emigration Canyon.

Doland, J.J., Larson, T.E. and Reinhardt, C.O. Model study of spillway characteristics. Ill. State Water Survey Circ. 20. 22pp., illus. Urbana, 1937. 292.9 I16C

Bibliography p.19.

As a result of the studies it is suggested that erosion could be lessened or prevented by extending the paved discharge channel down stream with facilities for inducing a hydraulic jump on the apron.

Eckstein, Oskar, Bruno, Albert and Turrentine, J.W. Potash deficiency symptoms. 335pp., illus. Berlin Verlagsgesellschaft für Ackerbau, 1937. 463.34 Ec5

Forster, G.W. Farm organization and management. 210pp., processed. Ann Arbor, Mich., Edwards Brothers, inc., 1937. 281.12 F77
Reprint of 1935 edition.

Glendinning, R.M. The slope and slope-direction map. Mich. Acad. Sci., Arts and Letters, Papers 22:359-364, illus. Ann Arbor, University of Michigan press, 1937. 500 M582 v.22

The purpose of this paper is to indicate how a map made by combining a slope and slope-direction map may serve as a useful tool for those interested in describing and analysing the surface of the earth.

Glock, W.S. Principles and methods of tree-ring analysis... 100pp., illus. Washington, D.C. Carnegie Institution of Washington, 1937. 463.36 G51
Issued as Carnegie Institution of Washington. Publication no. 486.
"Selected bibliography," pp. 94-97.

"It will be seen by the reader that the author is here clearing the road to climatic studies in tree rings, first by pointing out some of our methods and techniques and principles, second by establishing what we might call the integrity of the trees we have used for this purpose, and third by a display of the factors that will lead to the study of past climates by the aid of tree rings."--From foreword by A.E. Douglas.

Graham, E.H. Botanical studies in the Uinta Basin of Utah and Colorado. Pittsburgh. Carnegie Inst. Museum. Annals XXVI. 432pp., illus. Pittsburgh, December 15, 1937. 500 P68A v.26
Bibliography, pp. 392-399.

Illinois. Department of public works and buildings. Division of waterways.
Stream flow data of Illinois. 690pp., tables. [Springfield] 1937
292 I164

Compiled under the direction of Walter M. Smith in cooperation with
the United States Geological Survey.

"The volume now presented is in reality a second edition of the book
'Water Resources of Illinois' published by the State in 1914...and
edited by A.H. Horton...This new volume contains not only a reprint of
much of the essential data in the former work, but also a vast amount of
material covering the years that have elapsed [since 1911] In the main this
has consisted in gathering the discharge records of Illinois streams
found scattered in over twenty separate U.S. Geological Survey Water-
Supply Papers, many of which are now out of print."

Mississippi state planning commission. Land planning division. Natural
vegetation, Mississippi (forest types) 7pp., mimeogr. [Jackson,
Mississippi, 1937] 280.7 M6922

National research council. Division of geology and geography. Committee on
sedimentation. Report 1936-1937. 128pp., mimeogr. Washington, D.C.,
October 1937. 400 M21

Partial contents: Sedimentation studies by the Soil conservation
service, by C.B. Drown, pp. 10-22; Research on sediments by British scientists
during 1954-1956; summary of progress, by H.I. Milner, pp. 25-30; Monograph for
the settling velocity of spheres, by Hunter Rouse, pp. 57-64; Bibliography on
roundness and shape of sedimentary particles, by R.D. Russell and R.E.
Taylor, pp. 65-80; The bottom sediments of Lake Monona, a fresh-water lake
of southern Wisconsin, by W.H. Twenhofel, pp. 105-108; Classification and
selected bibliography of the surface textures of sedimentary fragments,
by Lou Williams, pp. 114-128.

North American Wildlife conference. Transactions of the second... confer-
ence March 1, 2, 3, 4, 1937... St. Louis, Missouri... 661pp. Washington,
D.C., American wildlife institute, 1937. 412.9 Y814 26, 1937.

Partial contents: Soil and wildlife conservation - a report of progress,
by E.C. Molt, pp. 78-82; Making erosion control benefit wildlife, by R.D.
Stevens, pp. 268-275; The beaver - conservor of soil and water, by W.L. Finley,
pp. 295-297; The dependence of soils on animal life, by W.R. VanDersal,
pp. 458-467; Natural vegetation in soil conservation and wildlife manage-
ment, by H.L. Whitaker, pp. 468-475.

Schoklitsch, Armin. Hydraulic structures. A textbook and handbook...
translated by Samuel Shulits... 2v. illus. N.Y., The American society
of mechanical engineers, 1937. 290 Sch62H

"Translation reviewed by Lorenz G. Straub, first Freeman traveling
fellow of the American Society of Civil Engineers."

The preface states that "this treatise is presented as a textbook
for engineering students and as a reference work for practicing
engineers... The entire field of hydraulic structures with the exception
of coast works is treated in two volumes with a total of eleven parts."

Partial contents: Part I. Meteorology. Precipitation, evaporation; Part II.
Hydrology and hydraulics. Correlation. Runoff. Bed-sediment load and sus-
pended matter in water courses. Ground water; Part III. Soils and mechanics.
Properties of soils; Part V. Water-supply engineering; Part VII. Dams, outlet
works, and canal intake works; Part IX. Reclamation. Land drainage. Irrigation;
Part X. River engineering. River structures. Improvement of streams. Flood
control.

Schroeder, Gerhard. Landwirtschaftlicher wasserbau. 397pp., illus.
Berlin, Verlag von Julius Springer, 1937. 290 Sch72
-Handbibliothek für bauingenieure, v.7, part 3

This volume covers agricultural hydraulics. The early chapters contain a brief treatment of fundamental soil and stream science, and such botanical and meteorological information as is necessary. The latter chapters take up drainage through small and large watercourses (including regulation), irrigation, and land reclamation.

Stebbing, E.P. Forests of west Africa and the Sahara. A study of modern conditions. 245pp., illus. London, W. & R. Chambers, Ltd. [1937]
99.27 St3

Chapters I - V deal with the menace of soil impoverishment in West Africa.

Tanganyika territory. Department of agriculture. Annual report 1936.
99pp. Dar Es Salaam, Govt. Printer, 1937. 24 T15 1936
Soil erosion, pp. 8-9.

"In every area in which there is an agricultural officer demonstrations of methods have been laid down, some on scale. Sound soil practice is usually required where new crops are introduced or with permanent crops under expansion. Thus onions, when the crop was expanded on Kilimanjari, were deliberately recommended to be grown on terraces. All wheat in the hills to the north of Kilosa-Merogoro, a recently introduced crop, is grown on contour strips. Native coffee in Songea, Tukuyu, Mbosi, Bugufi and Kilimanjaro is planted in approved fashion on approved sites and the deliberate planting of crops in line on the contour is in evidence.

"A number of native authorities have adopted and are enforcing rules to deal with soil erosion and the protection of trees and herbage on river banks...

"There is a growing tendency to protect hilltops and hillsides and retire cultivation to more gently sloping land. Contour matuta (planting ridges) lines of pigeon-pea and manyara on contour, and contour wind-breaks are all beginning to slowly come into practice..."

Thibodeaux, B.H., Bates, C.H. and Bonnen, C.A. Farm business report, Elm creek watershed, black prairie area, Texas, 1933 (Preliminary) 25pp., mimeogr.
College State, Texas, April 1937. 281.083 T31F

At head of title: Texas agricultural experiment station in cooperation with Bureau of agricultural economics and Soil conservation service, United States Department of agriculture.

The relation of the erosion problem to farm organization, operation and earnings, pp. 18-22; Preliminary observations on the effect of terracing on yields of cotton and corn in 1936.

Western states regional extension conference. Proceedings of... conference held at Spokane, Washington, May 24-27, 1937. 323 numb. 1., mimeogr.
n.p., [1937] 275.29 W523

Partial contents: Range conservation and erosion control, by H.H. Bennett, pp. 16-33; Conservation of the western range, by G.E. Farrell, pp. 35-49; Range livestock industry and land conservation, by R.E. Willard, pp. 51-72; Range conservation and rodent control, by W.C. Henderson, pp. 73-82; Rodent control aided by emergency conservation work, by S.P. Young, pp. 83-122; Irrigation and the conservation of the range, by W.W. McLaughlin, pp. 123-143.

Williams, G.B. Storage reservoirs. 293pp., illus. London, Chapman & Hall, Ltd., 1937. 290 W674S

STATE EXPERIMENT STATION AND EXTENSION PUBLICATIONS

Arizona

Treazcale, J.F. and McGeorge, W.T. Studies on soil structure: some nitrogen transformations in puddled soils. Ariz. Agr. Exp. Sta. Tech. Bull. 69. 252pp., illus. Tucson, Aug. 15, 1937. 100 Ar4[t]no. 69
Bibliography, p. 69

Arkansas

Stevens, R.D. Farm timber crop in Arkansas. Ark. Agr. Col. Ext. Circ. 396. 32pp., illus. Little Rock, June 1937. 275.29 Ar4 no. 396

Turner, L.M. Growing black locusts for posts. Ark. Agr. Col. Ext. Circ. 327. rev. ed., 7pp. Little Rock, June 1937. 275.29 Ar4 no. 327

Turner, L.M. Trees of Arkansas. Ark. Col. Agr. Ext. Circ. 180. rev. ed., 112pp., illus. Little Rock, June 1937. 275.29 Ar4 no. 180 rev.

Colorado

Keonce, Dwight. High-altitude studies on dry-land grasses and clovers. Colo. Agr. Exp. Sta. Bull. 439. 16pp., illus. Fort Collins, November 1937. 100 C71S[b]no. 439

Data present results obtained on forage yields and stand of grasses and clovers planted on dry land at the Fort Lewis Experimental Farm for the 10-year period, 1926-35.

Illinois

Smith, R.S. and Wascher, Herman. Peoria county soil types. Revised descriptions and recommendations for use and management. 12pp., illus. Urbana, Illinois agricultural experiment station, June 1937. 100 Il6S0 unnumb.
Supersedes Soil report no. 19.

Iowa

Wilcox, M.W. Livestock production in Iowa as related to hay and pasture. Iowa Agr. Exp. Sta. Bull. 361. 92pp., illus. Ames, December 1937. 100 Io9[b]no. 361

"This bulletin reports in non-technical language what is likely to happen to livestock production in Iowa as the program to grow more grass is realized."

Massachusetts

Massachusetts agricultural college. Extension service. Building Massachusetts soil with the agricultural conservation program. Mass. Agr. Col. Ext. Leaflet 175. 12pp., illus. Amherst, November 1937. 275.29 M381L no. 175
Contents. Improving hay and pasture crops, by R.W. Donaldson, pp. 2-6; Building up market garden soils, by J.W. Dayton, pp. 6-8; Orchard soil improvement, by W.H. Thies, pp. 9-10; Woodland improvement, by R.B. Parmenter, pp. 10-12.

Michigan

Partridge, N.L. and Toenjes, Walter. Annual cover crops for Michigan orchards. Mich. Agr. Exp. Sta. Circ. Bull. 163. 12pp., illus. East Lansing, October 1937. 100 M58S[cb] no. 163

Missouri

Baver, L.D. and Hall, N.S. Colloidal properties of soil organic matter. Mo. Agr. Exp. Sta. Res. Bull. 267. 23pp., illus. Columbia, October 1937. 100 M693[r]
Bibliography, p. 23.

Missouri agricultural experiment station. Forest restoration in Missouri. Mo. Agr. Exp. Sta. Bull. 392. 153pp., illus. Columbia, November 1937. 100 M693[b] no. 392
Partial contents: Physical aspects of land in relation to forest use, by H.H. Krusekopf, pp. 14-16; Stream flow and flood control - a forester's viewpoint, by R.H. Peck, pp. 31-34; Stream flow and flood control - an engineer's viewpoint, by H.C. Beckman, pp. 34-36; Control of erosion, by L.D. Baver and R.H. Westveld, pp. 36-39.

Montana

Slagsvold, P.L. and Lord, H.H. The conservation of Montana's irrigated land. Mont. Agr. Exp. Sta. Bull. 350. 32pp., illus. Bozeman, December 1937. 100 M76[b] no. 350

"It is the purpose of this study (1) to determine the extent and nature of soil depletion on irrigated land in Montana, and (2) to determine from a study of farm organization and management practices, the adjustments which might be helpful in conserving the soil."

New Jersey

Bender, C.B. Intensive pasture management. N.J. Agr. Exp. Sta. Bull. 633. 12pp., illus. New Brunswick, September 1937. 100 N46S[b] no. 633
Gives results of intensive pasture management studies over the last 10 years on many soil types in New Jersey, ranging from sandy loams to the heavier soils.

New Mexico

Reid, Tom. Erosion control crops and practices for the non-irrigated farming area of New Mexico. N.Mex. Agr. Col. Ext. Circ. 149. 20pp., illus. State College, August 1937. 275.29 N463E no. 149

New Mexico - Continued

Reid, Tom. - continued

Recommended practices for wind erosion control in New Mexico are contouring, terracing, contour listing and furrowing, contour chiseling, border planting, strip cropping, and pasture contouring.

Recommended crops are sudan grass, forage sorghums, grain sorghums, broomcorn and corn.

Due to more efficient means of erosion control, it is suggested that it is now possible to increase the number of gardens and orchards throughout the area by the concentration, retention and utilization of flood waters by terracing, spreading, diversion dams and flood ditches

New York

Beck, R.S. An economic study of land utilization in Rensselaer county, New York. N.Y. Cornell Agr. Exp. Sta. Bull. 675. 41pp., illus. Ithaca, June 1937. 100 N48C [b] no. 675

Includes land classification map.

Wessels, P.H. and Hartman, J.D. Experiments with cover crops on Long Island. N.Y. Cornell Agr. Exp. Sta. Bull. 677. 27pp., illus. Ithaca, June 1937. 100 N48C [b] no. 677.

References. p. 27

During the experiment which took place from 1923 to 1936 eleven different cover-crop treatments were tried each year: rye, rye and vetch, oats and vetch, crimson clover and oats, timothy and alsike, red-top and alsike, pearl millet, Japanese millet, wheat and barley.

Recommendations: rye should continue to be the choice for a cover crop.

North Dakota

Anderson, H.G. County agricultural planning, North Dakota. Suggestions of the county program planning committees during their meetings in 1936-1937. N. Dak. Agr. Col. Ext. Circ. 159. 23pp., illus. Fargo, November 1937. 275.29 N812 no. 159

The County Program Planning Project was initiated for the purpose of encouraging farm groups to assist in recommending changes in the farming systems needed, from the standpoint of good land use and agricultural conservation. A number of questions were put to the committees for their consideration such as those involving short and long time changes in crop and livestock production plans, crop acreages, hay and pasture acreage and size of farms. The statement of those questions and a summary of the answers given are found in this circular.

Pennsylvania

Patrick, A.L. Soil erosion survey of Pennsylvania. Penn. Agr. Exp. Sta. Bull. 354. 23pp., illus., map. State College, February 1938. 100 P38 [b] no. 354.

References p. 23

Pennsylvania - Continued

Patrick, A.L. - continued

Type, extent, effects and factors of soil erosion; the research program of the Soil Conservation Experiment Station at State College; and erosion control demonstration projects.

South Dakota

Puhr, L.F. and Olson, Oscar. A preliminary study of the effect of cultivation on certain chemical and physical properties of some South Dakota soils. So. Dak. Agr. Exp. Sta. Bull. 314. 31pp., illus. Brookings, September 1937. 100 So82[b]no.314

The summary states that the structural analysis of the virgin and cultivated soils, as determined by the Bouyoucos and Yoder methods, show that cultivation has not had a pronounced effect upon soil structure.

Figure 8, p.28 summarizes the chemical changes of South Dakota soils brought about by cultivation.

Tennessee

Martin, G.E. The place of terraces in Tennessee agriculture. Tenn. Agr. Col. Ext. Pub. 209. 12pp., illus. Knoxville, November 1937. 275.29 T25 no.209.

Texas

Fonner, C.A. and Thibodeaux, B.H. A description of the agriculture and type-of-farming areas in Texas. Texas Agr. Exp. Sta. Bull. 544. 91pp., illus. College Station, June 1937. 100 T31S[b] no.544

Historical background, land utilization and crop distribution, live-stock enterprises and description of type-of-farming areas.

Cory, V.L. and Parks, H.B. Catalogue of the flora of the state of Texas. Texas Agr. Exp. Sta. Bull. 550. 130pp. College Station, July 1937. 100 T31S[b] no.550

Franko, Louis. Legumes for Texas. Texas Agr. Col. Ext. Serv. Circ. C-118. 8pp., illus. College Station, [1937?] 275.29 T312C no.C-118.

Fraps, G.S. and Fudge, J.F. Chemical composition of soils of Texas. Texas Agr. Exp. Sta. Bull. 549. 87pp., illus. College Station, July 1937. 100 T31S[b] no.549.
References, pp.85-87.

Parks, H.B. Valuable plants native to Texas. Tex. Agr. Ext. Sta. Bull. 551. 173pp. College Station, August 1937. 100 T31S[b]no.551

"The total number of plants on which records have been taken is more than three thousand. Included in this list are those plants which apparently have abundant possibilities for service in the various projects which are now being carried on for the use of native plants as ornamentals, as a means of erosion control, and for the various other services to which plants may be utilized."

Vermont

Dykhuizen, George. Soil conservation, a philosopher's viewpoint.
Vt. Agr. Col. Ext. Circ. 97. 23pp. Burlington, January 1938.
275.29 V59C no. 97

This discussion includes the following topics: Soil conservation and moral problems; Historical background; Social good and the good of the farmer, with sub-topics, solution by compulsory soil conservation, solution by nationalization of land or solution by governmental subsidy; Social control versus individual liberty.

Virginia

Gibson, W.L., Jr. An economic study of farming in Appomattox county, Virginia. Va. Agr. Exp. Sta. Bull. 311. 47pp. Blacksburg, October 1937.
100 V81S[b] no. 311

Data derived from a farm management survey of 238 farms in the Wreck Island Creek Watershed undertaken by the Soil Conservation Service and the Virginia Agricultural Experiment Station.

Relation of the extent of erosion to returns and various factors, pp. 40-41.

Washington

Washington agricultural experiment station. Crop rotations... Wash. Agr. Exp. Sta. Bull. 344. 73pp., illus. Pullman, March 1937.
100 W27E[b] no. 344.

Literature cited, pp. 50, 73.

Part I. Effect of crop rotations on succeeding crops, by E.G. Schafer;
Part II. Effect of crop rotations on productivity of the soil, by L.C. Wheeting and S.C. Vandecaveye.

West Virginia

Pohlman, C.C. Land classification in West Virginia based on use and agricultural value. West Va. Agr. Exp. Sta. Bull. 284. 31pp., illus.
Morgantown, November 1937. 100 W32[b] no. 284

Fulletin 285 entitled "Land-class maps of West Virginia" accompanies the above publication.

Wisconsin

Zor, Raphael and Cunningham, R.H. The farm woodland - a neglected resource. Wis. Agr. Col. Ext. Serv. Stencil Circ. 186. 6pp., mimeogr.
Madison, March 1937. 275.29 W75B no. 186.

U.S. GOVERNMENT PUBLICATIONS

Department of Agriculture

Bennett, H.H. Unmaking a continent. U.S. Soil Conserv. Serv. SCS-MP-19. 18pp., mimeogr. Washington, D.C., January 1938. 1.96 Ad62
Address before the Brooklyn Institute of Arts and Sciences, April 22, 1937.

Department of Agriculture - Continued

- Coehe, M.H. and Jensen, J.C. Progress in the adoption of selected erosion control practices Coon creek area, Wisconsin. U.S. Soil Conserv. Serv. SCS-RB-5. 37pp., illus., mimeogr. Washington, D.C., May 1937. 1.9605 P942
- Cole, J.S. and Morgan, C.W. Implements and methods of tillage to control soil blowing on the northern Great Plains. U.S. Dept. Agr. Farmers Bull. 1797. 20pp., illus. Washington, U.S. Govt. print. off., January 1938. 1 Ag84F no. 1797
Topics discussed are protective covers, including grain crops and plowless fallow; tillage implements, such as the plow, lister, disk, spike-tooth harrow, spring-tooth harrow, field or duckfoot cultivator, common row cultivator, one-way, furrow drill and rotary rod weeder; influence of the preceding crop, namely beans, corn and sorghum, potatoes, alfalfa and sweet-clover; strip cropping, regrassing and emergency control.
- Dahl, A.S. Abstracts of pasture literature. U.S. Soil Conserv. Serv. SCS-TP-15. 369pp., mimeogr. Washington, D.C., October 1937. 1.96 Op2Ab
Includes abstracts of papers published up to 1934. They were written by the staff of the Division of Forage Crops and Diseases of the Bureau of Plant Industry and mimeographed by the Soil Conservation Service.
- Flaxman, E.M. and Barnes, L.H. Advance report on the sedimentation survey of Ottawa county state lake, Bennington, Kansas, March 23 to April 13, 1937. U.S. Soil Conserv. Serv. Div. Research. Sedimentation Studies SCS-SS-18. 10pp., illus., mimeogr. Washington, D.C., November 1937. 1.96 R31R SS-18
- Flory, E.L. Soil and water conservation and plant-soil relationships in the southwest. U.S. Soil Conserv. Serv. Southwest Reg. Bull. 20, Soil Series 1. 14pp., mimeogr. Albuquerque, N.M., Nov. 11, 1937. 1.9608 So31
- Goke, A.W. and Penn, R.E. Soil survey of Greer county, Oklahoma. U.S. Bur. Chem. and Soils. Series 1932, no. 21. 34pp., illus. Washington, U.S. Govt. print. off. October 1937. 1 So32F 1932 no. 21
- Holzman, Benjamin. Sources of moisture for precipitation in the United States. U.S. Dept. Agr. Tech. Bull. 589. 41pp., illus. Washington, U.S. Govt. print. off., October 1937. 1 Ag84T no. 589
Literature cited, pp. 39-41.
This publication forms an important contribution to the literature of climatology for in it the author presents a revised concept of the hydrologic cycle. He demonstrates the intimate relation between modern air-mass meteorology and hydrology.
- Hough, J.L. and Flaxman, E.M. Advance report on the sedimentation survey of Black canyon reservoir, Emmett, Idaho, May 21 to August 13, 1936. U.S. Soil Conserv. Serv. Div. Research. Sedimentation Studies SCS-SS-19. 20pp., illus., mimeogr. Washington, D.C., December 1937. 1.96 R31R SS-19

Department of Agriculture - Continued

Lee, W.D., Hayes, F.A., Bacon, S.R. and Lovald, R.H. Soil survey of Koya Paha county, Nebraska. U.S. Bur. Chem. and Soils. Series 1933, no. 10. 42pp., illus. Washington, U.S. Govt. print. off., October 1937. 1 So32F 1933 no. 10

Leonard, L.T. Nitrogen-fixing bacteria and legumes. U.S. Dept. Agr. Farmers' Bull. 1784. 14pp., illus. Washington, U.S. Govt. print. off., December 1937. 1 Ag84F no. 1784

Lewis, H.R. Rate of flow of capillary moisture. U.S. Dept. Agr. Tech. Bull. 579. 29pp., illus. Washington, U.S. Govt. print. off., October 1937. 1 Ag84T no. 579

"Literature cited," pp. 27-29.

"The experiments reported herein were designed to furnish data on the rate at which capillary water will move through various soil types under the influence of gradients in the moisture content.

"The importance of these data for the solution of many field and orchard problems is discussed.

"Most of the recent pertinent literature in English on the subject is briefly reviewed."

Meginnis, H.G. Sulphuric acid treatment to increase germination of black locust seed. U.S. Dept. Agr. Circ. 453. 34pp., illus. Washington, U.S. Govt. print. off., November 1937. 1 Ag84C no. 453.

Mitchelson, A.T. and Muckel, D.C. Spreading water for storage underground. U.S. Dept. Agr. Tech. Bull. 578. 80pp., illus. Washington, U.S. Govt. print. off., December 1937. 1 Ag84T no. 578.

Information is given on methods of spreading, ground-water conditions in California, spreading systems in California and percolation rates.

Moran, W.J. and Hayes, F.A. Soil survey of Boyd county, Nebraska. U.S. Bur. Chem. and Soils. Series 1933, no. 9. 44pp., illus. Washington, U.S. Govt. print. off., October 1937. 1 So32F 1933 no. 9

Myers, Lawrence and Omohundro, E.H. Diversion of cotton and cotton products from their normal channels of trade. U.S. Agric. Adjus. Admin. Marketing Section. DM&MA MS 41. 23pp., illus. processed. [Washington, D.C.] February 1938. 1.94 Ad471s no. 41

Among the uses for cotton fabric are the following: linings for terrace ditches; temporary fixation of soil on cuts and fills of roads; erosion control in connection with work on levees and revetments.

Information concerning these uses is given on pages 5-9.

Rule, G.K. Conserving corn belt soil. U.S. Dept. Agr. Farmers' Bull. 1795. 59pp., illus. Washington, U.S. Govt. print. off., November 1937. 1 Ag84F no. 1795

Among the topics discussed are leaching, crop removal, depletion of humus, soil as related to erosion, contour farming, strip cropping, buffer-strip cropping, strip cropping on terraced land, grassed waterways, cover crops, terraces, outlets, plowing terraced land, gully treatment, the West Tarkio river project and the Indian creek project of the Soil Conservation Service.

Department of Agriculture -- Continued

Savage, D.A. and Runyon, H.E. Important plant species encountered on pastures and abandoned farm land in the central and southern Great Plains in 1935 and 1936. 19pp., processed. [Washington, D.C. 1937] 1.9 P691 Im

Issued by U.S. Bureau of Plant Industry, Division of Forage Crops and Diseases.

Stevens, R.O. Wildlife conservation through erosion control in the Piedmont. U.S. Dept. Agr. Farmers' Bull. 1788. 25pp., illus. Washington, U.S. Govt. print. off., November 1937. 1 Ag84F no. 1788

"The purpose of this Bulletin is to show how gullies, terrace outlets, waterways, eroding field borders, pastures and woodlands in the Piedmont region may be protected against erosion through the use of vegetation that will also provide food and cover for wildlife."

Talbot, M.W. Indicators of southwestern range conditions. U.S. Dept. Agr. Farmers' Bull. 1782. 35pp., illus. Washington, U.S. Govt. print. off., December 1937. 1 Ag84F no. 1782

Signs of a deteriorating range are given as weakened vitality of principal forage plants; close grazing of inferior forage species; thinning ground cover of vegetation; accelerating erosion.

U.S. Soil conservation service, Division of conservation operations. Engineering section. Design and construction of the drop inlet soil-saving dam, compiled by the Technical unit... C.L. Hamilton in charge, from the designs of Neal Minshall. SCS-EP-14. 30pp., illus., mimeogr. Washington, D.C., June 1937. 1.96 Op2D

U.S. Soil conservation service, Division of research, Section of climatic and physiographic research. Precipitation in the Muskingum river basin, December 1937. U.S. Soil Conserv. Serv. Div. Res. Section Climatic and Phys. Res. SCS-TT-2. 9pp., processed. Washington, D.C., February 1938. 1.96 R31Pro TT-2

Prepared in cooperation with Muskingum watershed conservancy district.

U.S. Soil conservation service, Northwest region, Woodland section. Recent developments in the study of the influence of windbreaks. U.S. Soil Conserv. Serv., Northwest Reg. Woodland Sect. Woodland Sect. Bull. 10. 8pp., illus., mimeogr. Rapid City, S.D., Oct. 7, 1937. 1.9609 B87 no. 10

"References," p. 5.

Discussion of recent findings of U.S. Forest Service experiments relative to the influence of windbreaks in controlling wind velocity, factors in influencing effectiveness; effectiveness of windbreaks upon crop yields.

U.S. Soil conservation service, Pacific northwest region. Handbook of engineering practices. rev. ed., 93pp., illus., mimeogr. Spokane, Washington, Oct. 1, 1937. 1.9611 H19 Rev. Oct. 1, 1937.

Partial contents: Field engineering; mechanical gully control; creek channel stabilization; surface run-off control; small earth fill dams; coastal sand dune control; fencing; range water supply development; field practices.

Department of Agriculture - Continued

U.S. Soil conservation service. Soil conservation districts for erosion control. U.S. Dept. Agr. Misc. Pub. 293. 19pp., illus. Washington, U.S. Govt. print. off., October 1937. 1 Ag84M no. 293.

U.S. Soil conservation service. Southern Great Plains region, Amarillo, Texas. Preliminary report, economic survey, Clovis project area, New Mexico no. 9, ... region 6. 48 numb. l., mimeogr. [Washington, D.C.?] July 1937. 1.9696 p91

Issued by Economics Research Section, Research Division, Erosion Control Practices Section, Operations Division. Cooperating agencies - New Mexico Agricultural Experiment Station, New Mexico Agricultural Extension Service, Bureau of Agricultural Economics, U.S.D.A.

Furnishes information as to agricultural conditions in the area, type and organization of farms in the area, and methods of operation most commonly used on farms in the area.

Geological Survey

Dalrymple, Tate and others. Major Texas floods of 1936. U.S. Geol. Survey. Water-Supply Paper 816. 146pp., illus. Washington, U.S. Govt. print. off., 1937. 407 G29W no. 816

"The information in this report includes profiles of flood-crest stages on about 884 miles of rivers, results of 40 determinations of peak discharges made at miscellaneous places, records of peak stages and discharges and of mean daily discharges during flood periods at about 40 regular river-measurement stations, hydrographs of discharge at 26 river-measurement stations, records of rainfall at about 400 places, 8 isohyetal maps showing rainfall over the entire state and 4 isohyetal maps showing rainfall in more detail over smaller areas, records of past floods at all places in the state at which authentic records were available and other data pertinent to floods in Texas."

Grover, H.C. The floods of March 1936. Part 2. Hudson river to Susquehanna river region. U.S. Geol. Survey. Water-Supply Paper 799. 380pp., illus. Washington U.S. Govt. print. off., 1937. 407 G29W no. 799

Grover, H.C., Batchelder, C.L., Grosbach, H.E., Harrington, A.W., Kinnison, H.B. et al. Surface water supply of the United States 1936. Part 4. St. Lawrence river basin. U.S. Geol. Survey. Water-Supply Paper 804. 160pp. Washington, U.S. Govt. print. off., 1937. 407 G29W no. 804.

Thom, E.H. Bibliography of North American geology for 1935 and 1936. U.S. Geol. Survey. Bull. 892. 504pp. Washington, U.S. Govt. print. off., 1937. 407 G29B no. 892

Troxell, H.C. and Peterson, J.Q. Flood in La Canada valley, California. U.S. Geol. Survey. Water-Supply Paper 796-C. 98pp., illus. Washington, U.S. Govt. print. off., 1937. 407 G29W no. 796-C

Describes and analyzes the debris movement and explains its causes and method of behavior.

The following is quoted from the concluding paragraph: "It appears that the presence of a vegetative cover, while it may tend to reduce landslides and debris movement, is in nowise a guaranty against soil movement if the rainfall is heavy and continuous."

Miscellaneous

Allred, C.E., Luebke, B.H. and Lanham, B.T. Survey of soil conservation practices in central west Tennessee. U.S. Works Prog. Admin. Rural Res. Ser. Monograph 59. 48pp., illus., mimeogr. Knoxville, Tenn., Oct. 15, 1937. 173.2 W89Co.no.59.

Bibliography p.37.

Department of Agricultural Economics and Rural Sociology, Agricultural Experiment Station, University of Tennessee in cooperation with Bureau of Agricultural Economics, Agricultural Adjustment Administration and Soil Conservation Service, United States Department of Agriculture.

Lilienthal, D.E. Nutrition and soil conservation...remarks of... director, Tennessee valley authority, before annual meeting of the American Dietetic Association...Richmond, Virginia...October 18, 1937. 12pp., mimeogr. [Washington, D.C.? 1937] 173.2 T25 Adr.

Issued by Tennessee Valley Authority.

The author states that "an impoverished soil means a low state of nutrition, and inadequate nutrition means an insecure, an unhappy and a weakened civilization." He then considers what the TVA and the public agencies cooperating with it are doing to meet the present crisis of soil depletion and soil exhaustion.

Digest in Conservation 4(1):17-19. Jan/Feb. 1938.

TRANSLATIONS ON FILE
in the
SOIL CONSERVATION SERVICE LIBRARY

Translator - Albert Chiera

- - - -

Candura, Giovanni. Studies and experiments on the drainage of lands with the mole-plough. (Studi ed Esperimenti sulla Fognatura dei Terrene con L'Aratro-Talpa.) 32pp. Roma, Italy.

Abstract from the First National Congress of Agrarian Mechanics. Florence, Italy, April, 1932.

Fanti, Arnaldo. The technique and practice of reclamations. (La Tecnica e la pratica delle bonificazioni.) 368pp. Milano, Ulrico Hoepli, 1915.

Ferrari, Egidio. Woods and pastures. (Boschi e pascoli: storia, importanza idro-geologica ed economico-sociale.) 364pp. Milano, Ulrico Hoepli, 1914.

Geslin, H. Bioclimatology and agronomic researches. (Bioclimatologie et Recherches Agronomiques.) Ann. Agron. 7(5): 728-773. Sept/Oct. 1937.

Godard, M. Influence of climatic factors on the growth of the sugar beet. (Influence des Facteurs climatigues sur la croissance de la Betterave sucriere.) Ann. Agron. 7(5): 696-727. Sept/Oct. 1937.

Translations - Continued

Motte, Jean. The Hudzu. (Le Huzu L'Agron.) Agron.Col.26(235)1-10.
July, 1937.

Negro, Carlo. Some points on atmospheric precipitation. (Questionelle
sulla precipitazione atmosferica.) Parts I-IV. Abstract from
Revista di Fisica, Matematica e scienze Naturali, 1909-1910.

Niccoli, Vittorio. Land improvement works. Part III. Extraordinary
land improvement works. (Miglioramenti fondiari. Part III.
Miglioramenti fondiari straordinari.) Turin, Italy, Unione Tipografico-
Editrice Torinese, 1923.

The Quinoa. (La Quinoa.) "La Chacra." p.84 June, 1936.

Serpieri, A. The law on integral land reclamation in Italy. (La legge
sulla bonifica integrale.) 156pp. Roma Istituto Poligrafico dello
Stato Libreria, 1934.

Valentini, C. Control of torrents and mountain basins. (Sistemazione
di Torrenti e facini montani.) 257pp. Milano, Ulrico Hoepli, 1930.

Viappiani, Antonio. Practical fluvial hydraulics. (L'idraulica fluviale
pratica, con esempi.) 331pp. Milano, Ulrico Hoepli, 1919.

FINIS

